

## OFFICE OF TRANSPORTATION TECHNOLOGIES UPDATE

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The United States faces major challenges in meeting the ever growing demand for transportation goods and services while minimizing adverse energy, environmental, and economic impacts. The total transportation sector of the U.S. remains over 97 percent dependent on petroleum fuels and consumes approximately two-thirds of the nation's oil demand. Highway transportation alone uses over half of the nation's oil demand, while the number of vehicles on our roads and miles driven continue to steadily increase. As a result, U.S. oil import demands continue to rise concurrently with an increase in the global demand for oil. Meanwhile, worldwide oil reserves are becoming more concentrated in a smaller number of countries, many of which are often politically unstable and opposed to U.S. interests.

This situation leaves us increasingly vulnerable to the potentially serious adverse economic impacts of disruptions in oil supply. The large and growing levels of oil imports also represent a major transfer of wealth from the United States to oil exporting countries; in 1995, this was about \$49 billion.

There is also continuing concern on the part of many U.S. citizens about the poor air quality in our cities and increasing levels of greenhouse gases. Fifty-four million Americans live in counties (mostly urban) that regularly do not meet air quality standards. Polluting emissions from transportation sources remain a major contributor to this problem.

Another national concern is the global market competition in the transportation sector. There is a critical need for the United States to further develop and nurture an advanced transportation technologies base that will enable domestic producers to meet the strong competitive threat from imports and take advantage of the opportunities offered by the rapidly growing overseas market for motor vehicles.

In order to effectively address the above challenges, it is essential that all of our available resources be integrated and focused on a common vision, a supporting mission, and time related, clearly defined, program goals. Our vision in the Office of Transportation Technologies is: ***Within the first decade of the twenty-first century, the United States will turn the corner in the growth of petroleum use for highway transportation.***

This vision means that the use of petroleum for transportation, which has maintained a generally upward trend for the last several decades, would start decreasing during the

first decade of the next century, as a result of the development of advanced transportation technologies and increased use of alternative fuels. Our realization of this vision, through the effective use of domestic resources and products, will immediately reduce our nation's major concerns relative to the transportation sector.

Clearly, a "revolution" in transportation technologies is required -- one which will enable us to use much less petroleum and move toward transportation fuels that are sustainable in the long run. The Department of Energy (DOE) and other Federal programs are working to initiate and accelerate this process of "revolutionary" change. As the government moves forward toward the realization of this vision, DOE is strongly committed to the full utilization of the best talents and resources available. We are currently engaged in the coordination and integration of transportation technology activities involving the combined efforts of industry, national laboratories, universities, and fuel suppliers.

Given the magnitude of the investment required and associated risks, this effort will require sustained commitment, creativity, and a willingness to simultaneously pursue multiple technological pathways. To be successful in this ambitious undertaking, the Office of Transportation Technologies must maintain the cooperation and support of industry, Congress, and the public. Effective and productive partnerships will be vital to success in establishing advanced vehicles and alternative fuels in the marketplace.